

***Southern Nevada District Manager's Report***  
**Mojave-Southern Great Basin Resource Advisory Council**  
**Tim Smith, District Manager**  
**February 6-7, 2014**

***National BLM/DOI Updates:***

**Neil Kornze Nominated as BLM Director:** Secretary of the Interior Sally Jewell praised President Obama's nomination of Neil G. Kornze as Director of the Bureau of Land Management (BLM). Kornze has led the BLM since March 1, 2013, as Principal Deputy Director, overseeing its conservation, outdoor recreation and energy development programs. Prior to this role, Kornze served as the BLM's Acting Deputy Director for Policy and Programs since October 2011. He joined the agency in January 2011 as a Senior Advisor to the Director and has worked on a range of issues, including renewable and conventional energy development, transmission siting and conservation policy. He also has been active in tribal consultation, especially regarding oil, gas and renewable energy development in Indian Country.

Before joining the BLM, Kornze was a Senior Policy Advisor to Senate Majority Leader Harry Reid, working on renewable energy, mining, water, outdoor recreation, rural development and wildlife conservation issues. He worked closely on developing and helping pass critical national legislation, including the Omnibus Public Lands Act of 2009 and the reauthorization of the Secure Rural Schools and Payment-in-Lieu-of-Taxes programs. Raised in Elko, NV, by a family with a long history in mining, Kornze has a master's degree in International Relations from the London School of Economics and is a Phi Beta Kappa graduate with a degree in Politics from Whitman College in Walla Walla, WA.

**Fee Free Days for BLM-Managed Public Lands Set for 2014:** The BLM, in conjunction with other agencies within the Department of the Interior, will waive recreation-related fees for visitors to the National System of Public Lands for Presidents' Day weekend (Feb. 15- Feb 17), National Public Lands Day (Sept. 27), and Veterans Day (Nov. 11) in 2014.

Site-specific standard amenity and individual day-use fees at BLM recreation sites and areas will be waived for the specified dates. Other fees, such as overnight camping, cabin rentals, and group day use, will remain in effect. More details about fee-free days and activities on BLM-managed public lands are available at:

[http://www.blm.gov/wo/st/en/prog/Recreation/BLM\\_Fee\\_Free\\_Days.html](http://www.blm.gov/wo/st/en/prog/Recreation/BLM_Fee_Free_Days.html).

### ***Southern Nevada District Office (SNDO) Updates:***

**BLM sells 160 acres netting \$23.84 million for projects in Nevada:** The BLM recently sold 160 acres in 24 parcels for \$23,840,000 during a competitive-public-land sale. The agency offered 440 acres, in 28 parcels, under the Southern Nevada Public Land Management Act (SNPLMA).

The parcels offered for sale varied in size from 2.5 acres to 250 acres. The 28 parcels offered appraised at a fair market value (FMV) of \$25,283,000. The largest parcel to receive a bid, 20 acres, sold for \$2.1 million at FMV. Four parcels, including the 250-acre largest parcel, received no bids.

In accordance with the SNPLMA, monies generated from the sale of public land may be used for specific purposes including parks, trails, and natural areas; capital improvements, conservation initiatives; and for the purchase of environmentally sensitive lands. Additionally, 10 percent of the funds will go to the Southern Nevada Water Authority, and five percent will go to the Nevada State General Education Fund.

<b>Total Acres Available</b>	<b>Total Appraised Value</b>	<b>Total Sale Price</b>
440.32	\$25,283,000	\$25,283,000

<b>Total Acres Sold</b>	<b>Total Appraised Value</b>	<b>Full Purchase Price</b>
160.23	\$17,648,000	\$23,840,000

**BLM sells land at steep discount for senior housing complex:** The BLM sold five acres of public land in November, to the State of Nevada Housing Division for development of affordable senior housing in the southern part of the Las Vegas Valley, at the intersection of Agate Avenue and Kimo Street. The sale is authorized under the Southern Nevada Public Land Management Act (SNPLMA).

The five-acre public-land sale is for the construction of a 182-unit senior-restricted rental housing complex known as the Agate Senior Apartments. This rental complex is for seniors whose income is less than 60% of the average medium income for the area. The BLM Nevada, in consultation with the Department of Housing and Urban Development (HUD), may make BLM-administered public land available at less than fair market value for affordable housing purposes. These lands are available only to State or local governmental entities, including local public housing authorities.

Under Section 7(b) of SNPLMA, the BLM conveyed the sale parcel to the Nevada Housing Division at a 95% discount. An appraisal of the parcel determined fair market value to be \$1,040,000. The offered purchase price, after applying the discount, totaled \$52,000.

Section 7(b) is a unique provision of the SNPLMA that allows only BLM Nevada the ability to offer lands for sale at less than fair market value for affordable housing purposes. This is BLM's third affordable housing land sale in southern Nevada.

**Southern Nevada District teams with UNLV for solar contest:** At the 2012 National Clean Energy Summit in Las Vegas, attendees learned that University of Nevada Las Vegas (UNLV) was invited to compete in the prestigious U.S. Department of Energy's Solar Decathlon competition. UNLV was looking for help with professional expertise, building materials, and financial donations.

In response, Southern Nevada District Office arranged for UNLV students to salvage old building materials from our Oliver Ranch bone yard such as weathered wood, rusty iron, broken stone, rusty metal roofing; materials that were scheduled to be hauled to the dump later that month.

This partnership proved to be a win/win for both the BLM and UNLV on many levels. Besides significantly reducing BLMs labor and trucking costs in removal and disposal of the materials; the BLM was able to partner in a meaningful project and international competition that educates the public about energy-saving residential designs.

The UNLV team won second place overall and first place in the nation for its DesertSol home, which blended consumer appeal and design excellence with optimal energy production and maximum efficiency.

Next time you come to Las Vegas, visit the Las Vegas Springs Preserve where the project will be on permanent display.

**SNDO Teaches Kids to Fish at Lorenzi Park:** The Southern Nevada District participated in the inaugural Las Vegas City Council, Ward 5 Youth Fishing Derby. Approximately 20 youth, and their parents, were invited to the newly renovated Lorenzi Park, where they enjoyed a great day of fishing. BLM staff, along with several community organizations, volunteered as fishing coaches, provided informational materials, and assisted the youth in handling the fish. The Southern Nevada Agency Partnership (SNAP) rolled out the SNAP mobile visitor center to much fan fair from the crowd of newly minted fishermen.

### ***Division of Fire and Aviation:***

**Vegas Valley Hand Crew Recognized with Pulaski Award:** The Vegas Valley Hand Crew recently received the Pulaski Award, which is one of the highest honors in the national wildland fire program. The Pulaski Award is a national fire award, which recognizes groups who show superior skill and experience in safety, interagency coordination, improving partnerships, and wildland fire suppression.

The all veteran Vegas Valley Hand Crew is recognized for its successes since the crew formed in 2012. Multiple layers of the BLM fire organization were involved in developing the crew from a concept to an instant success. In 2012, the crew worked 17 fires and spent 24 days on projects. Additionally, last season the crew drove over 62,000 miles, and completed 25 task books. The 12 crew members cross trained with the engine program and the interagency dispatch center.

This season, the crew spent 31 days committed to projects and 50 days committed to fire. The Vegas Valley crew is unique because it is one of only three Veteran Hand Crews in the BLM.

### ***Division of Law Enforcement:***

**Trash removal does make a difference:** In October, the Southern Nevada District Office Desert Clean-Up team participated in the annual Keep Las Vegas Beautiful/Make A Difference Day Event. The clean-up area was a BLM parcel at W Flamingo Blvd and S. El Capitan Way.

Volunteers included five members from the College of Southern Nevada Environmental Science Club, two local volunteers and BLM Desert Clean-Up Team members. Twenty cubic yards of trash was removed from the parcel. The volunteers did an outstanding job and contributed to the overall success of the event.

**Cold Creek get 75 new plants instead of more trash:** The Southern Nevada District Office Desert Clean-up conducted a clean-up in the Cold Creek area of illegally dumped household and landscaping debris. The 450 cubic yards of landscaping debris was large enough to warrant a prescribed fire of the material. Working with BLM fire crews, the team conducted a prescribed fire of the material in March and later removed the spent debris.

At the same time, a fiber optic installation project was in progress on public land along US Highway 95 from Las Vegas to Mercury. The project area was populated with various types of yucca and cactus plants which had to be removed. The BLM, with the help of the contractor, conducted a salvage/relocation operation and transplanted more than 75 plants to the site of the Cold Creek location.

**Upper Las Vegas Wash Spic and Span Master Clean-Up:** BLM hosted a desert clean-up of the paleontological area in the Upper Las Vegas Wash north of Las Vegas on November 16 for a group of 25 school kids from the UNR Master Gardeners group, their teachers and parents.

The group met with BLM Desert Clean-up team for a quick safety talk about the importance of keeping our public lands free of litter. They also received talks from the resident archaeologist and paleontologist on the history of the area. The group then toured the Southern Nevada Agency Partnership motorhome and learned about different public lands in Southern Nevada.

The group then proceeded to the paleo area to remove litter, look for fossils and mammoth bones. The group removed 81 cubic feet of trash. No fossils or bones were found.

**BLM Southern Nevada Law Enforcement trains with sister agencies:** The Southern Nevada District Office and the Southern Nevada Agency Partnership Law Enforcement team hosted a cross delegation law enforcement training.

Cross delegation training allows officers with BLM, U.S. Forest Service, U.S. Fish and Wildlife Service and National Park Service to enforce regulations on public land managed by other agencies.

Training included authority and jurisdiction of each agency as well as tips from the Special Assistant to the United States Attorney's Office on past court cases and how officers could do a better job with documenting and representing the government's cases. The communications center also provided training for regulations governing suspect information and changes to the dispatch center.

**SNDO welcomes K-9 Kahr:** Southern Nevada District Office recently welcomed its newest K-9 team, Ryan Parr and his German Shepard partner Kahr.

After being born in the Czech Republic a year and a half years ago, Kahr immigrated to the United States and began training at Shallow Creek Kennels in Sharpsville, Pennsylvania.

In October, SNDO's Law Enforcement Officer/Field Training Officer Ryan Parr began training with Kahr. Six weeks later, they were certified by BLM and North American Police Work Dog Association for narcotics (marijuana, cocaine, heroin, methamphetamine and ecstasy) and patrol (tracking, area search, and apprehension and handler protection.)

Proving that the first week of work doesn't have to be a time of transition, Kahr made his first drug find on the second day of work.

**Wrapping Up the Year with Cleaner Public Land:** In December, the BLM Desert Clean-Up Team hosted an Eagle Scout clean up on a BLM managed parcel within the Las Vegas Valley at Nevso and S. Riley. Enduring near freezing temperatures, scattered rain/sleet and high wind, 20 scouts, scout leaders and parents came out along with two BLM Desert Clean-Up Team members, to participate in the event.

The volunteers removed 30 cubic yards of illegally dumped trash, landscaping, construction and residential debris from the parcel. The group did an outstanding job despite the weather and endured numb fingers and toes.

On December 14, the Southern Nevada District Desert Clean-Up Team held its final volunteer event for the Fall 2013 season in the Lake Mead/Sunrise area within the Las Vegas Valley. Scout Troop 442, their leaders and family members participated in the event.

The area selected for clean-up was filled with heavy construction, household and landscaping debris. Due to previous commitments that morning, the scouts started their clean-up late in the day and worked at a fever pitch removing as much debris as humanly possible before darkness enveloped the area. With daylight waning, the event was ended by the on-site safety official. By the end of the event, the scouts removed 30 cubic yards of trash and debris from the area.

### ***Division of Southern Nevada Public Land Management Act (SNPLMA):***

**Lorenzi Park gets SNPLMA makeover:** With all the talk of SNPLMA dollars dwindling, and overshadowing discussions about the landmark legislation, it's always heartwarming to see the dollars on the ground. Lorenzi Park is in Las Vegas ward 5. It's not swanky like Summerlin, or a hot spot like Alliant or Mountains Edge, but it's a community with a big heart. A few high-energy public land auctions, \$25 million dollars later, and this established community now has a

new heartbeat. BLM granted Las Vegas the funds through round six approvals, which provided for a complete renovation of the park including a new fishing pond, picnic areas, a rose garden, etc. Lorenzi Park is also one of two Nevada projects nominated by Governor Sandoval for inclusion in the Secretary's America's Great Outdoors designation.

**SNPLMA Funded Craig Ranch Regional Park Opens in North Las Vegas:** On Wednesday, October 23, the Assistant District Manager for the Southern Nevada Public Land Management Act Division joined state and local dignitaries at the Dedication of the 150-acre Craig Ranch Regional Park. The park is centrally located in the City of North Las Vegas, on Craig Road near I-15. SNPLMA funding was used to purchase and convert a private golf course into a park with athletic fields for everything from baseball fields to tennis courts to a world-class skateboarding facility, built demonstration gardens, installed large group picnic pavilions, a dog park, and public gathering spaces suitable for various types of venues. The Dedication was held in the largest of the gathering spaces. The park also connects to a 13 mile regional trail along the Las Vegas Wash. The project consisted of five separate funding phases for approximately \$130.5 million. The park opened in October.

### ***Field Office Updates:***

#### ***Las Vegas Field Office:***

**BLM Las Vegas Field Office announces wilderness plans:** The Arrow Canyon Wilderness Area management plan is available for the 27,180-acre area located on public lands northeast of Las Vegas in Clark County. Also, the Jumbo Springs and Lime Canyon Wilderness Areas plan is available for the 4,460-acre and a 23,710-acre area, respectively – located on public lands northeast of Las Vegas in the Gold Butte region of Clark County.

Copies of the plans are available online at

[http://www.blm.gov/nv/st/en/fo/lvfo/blm\\_programs/blm\\_special\\_areas/wilderness/wilderness\\_in\\_fo\\_page/arrow\\_canyon\\_wilderness.html](http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/blm_special_areas/wilderness/wilderness_in_fo_page/arrow_canyon_wilderness.html)

[http://www.blm.gov/nv/st/en/fo/lvfo/blm\\_programs/blm\\_special\\_areas/wilderness/wilderness\\_in\\_fo\\_page/jumbo\\_springs\\_wilderness.html](http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/blm_special_areas/wilderness/wilderness_in_fo_page/jumbo_springs_wilderness.html)

Copies may be obtained by contacting the BLM Las Vegas Field Office at (702) 515-5297.

Some of the specific actions included in the plans are:

- Improve recognition of the wilderness boundaries
- Eliminate vehicle intrusions in wilderness
- Designation of Arrow Canyon Trail for hiking and equestrian use
- Establishment of staging areas and installation of information kiosks
- Restoration of impacts from geological sampling and graffiti

- Establish management rules for maintenance of and access to the Arrow Canyon Dam
- Coordinate with other agencies to achieve healthy land goals, including wildlife, habitat and desired vegetation goals
- Allow for protection and study of unique archaeological, geological, and paleontological resources
- Management of fire
- Monitor for and remove invasive exotic or noxious plant species
- Management of recreational uses including camping, hunting, technical rock climbing, and horseback riding

**BLM Las Vegas and the Britany Spears Stunt:** The Southern Nevada District Office is always busy and September 17 was no exception. The Las Vegas Field Office, Division of Lands, worked very hard to organize and issue a film permit for the filming of a “Good Morning America” episode, involving a large card stunt. The card stunt showcased the announcement of Britney Spears, the new star scheduled to headline her own show here in Las Vegas.

The stunt was filmed on Jean Dry Lake, near Interstate 15 and included more than 1,400 people, who arrived via 28 buses. Britney Spears made her grand appearance “in true diva fashion” by helicopter to announce her Las Vegas residency show at Planet Hollywood. The BLM was on hand to monitor the set up and actual event, ensuring the lake bed and resources were protected, and safety requirements and stipulations were followed. Given the size of the crowd, the event went smoothly.

**AmeriCorps members play key role in Mojave desert restoration:** Most people are surprised to learn that one the biggest challenges in ecological restoration in the Mojave Desert is the supply of native plants and seeds used to re-establish native plant communities. At first blush, it would seem like an easy task to go out into the desert and collect some native seeds and sprinkle them on the damaged site being restored.

The Mojave Desert is one of the most biologically diverse biomes in North America. Just being able to identify key plants from among the hundreds of species is a daunting task. And then there is the timing; not every species produces seeds in a given year. Some species of annual plants may lie dormant in the seed bank for years before bursting forth to produce a blanket of green across the landscape when moisture and temperature conditions are just right.

Once the right plants are found and mapped, the seeds are collected, cleaned, processed and stored. Some seeds then need refrigeration to simulate winter conditions and others treatment with acid to mimic digestive juices of mammals that would pass the seeds through their digestive systems in nature.

Each step of the process requires patience, expertise, and meticulous attention to detail—the exact qualities Southern Nevada District office was able to find in two AmeriCorps members we recruited to help fill a crucial gap in our native plant materials program. For the past four months, our AmeriCorps members have been able to make 14 seed collections of nine species and have monitored and collected seed from the Las Vegas Buckwheat—a plant proposed for listing as an Endangered Species.

**Win-win project for BLM and private land owner:** The Las Vegas Field Office recently issued its first reciprocal Right-of-Way/Non-Exclusive Easement, for 0.58 acres. This innovative right-of-way allows the private homeowner specific road and utility access on public lands at no cost, while the Non-Exclusive road easement allows BLM the most obtainable access across the homeowner's land in order to construct and maintain two fish barriers on public land along the Muddy River in Clark County.

This Southern Nevada Public Land Management Act funded project was a multi-agency effort and Realty Specialist Dorothy Jean Dickey and Supervisory Natural Resource Specialist Mark Slaughter coordinated and worked closely with the private owner and other agencies to ensure success. The project and construction stayed on schedule and made this major project successful. The fish barrier will ensure protection of the Endangered Species the Moapa dace from invasive fish.

**Southern Nevada implements multiagency ecological restoration tool:** Tracking human-caused disturbances as well as subsequent restoration measures across seven million acres is a daunting task, to say the least. Each year, restoration crews from land management agencies across southern Nevada document hundreds of illegal roads, burned areas, dumping sites, graffiti, damaged fences, weed infestations, and the like.

Now, land managers have a new tool in their arsenal to help track these disturbances and undertake restoration activities across agency boundaries. The tool is called the Disturbance Inventory and Restoration Tracking (DIRT) database, and it is the result of years of multi-agency collaboration by the Southern Nevada Restoration Team (SNRT), which includes restoration managers from BLM, National Park Service, U.S. Forest Service, and U.S. Fish and Wildlife Service. DIRT's primary function is to inventory disturbances to natural resources consistently across the landscape, using specific measurements that can be used to categorize different disturbances, and assess the severity of each disturbance. Over the past two years, 12,758 disturbances have been entered into the database, to produce a comprehensive map of disturbances over an area the size of Massachusetts.

Researchers have developed a decision-tree to guide restoration of various disturbance types using a suite of techniques tested by each agency. For example, restoration crews at Red Rock Canyon National Conservation Area now use this decision-tree to explore which restoration techniques would be most effective: Should we broadcast native seeds or plant nursery grown shrubs? Do we use heavy equipment to rip furrows in an unauthorized road, or leave it to heal on its own? DIRT helps answer questions like these with an algorithm based on biophysical factors like slope, soil type, and the presence of biological soil crusts, management factors like access to water, and human dimension factors like accessibility and visibility.

The BLM Southern Nevada District and SNRT will continue to refine DIRT through 2014 to ensure proper training and quality control, and to develop queries and map products that managers can use to prioritize ecological restoration projects.

## ***Red Rock/Sloan Field Office:***

**Red Rock Canyon Now Accepts Credit Cards:** The BLM began accepting credit cards for payment of amenity fees at Red Rock Canyon National Conservation Area on August 27, 2013. Fees have been collected at Red Rock Canyon since 1998, but until a few weeks ago, only cash or checks were accepted at the entrance station. Simple credit card swipe terminals such as those found at retail establishments were installed earlier in the summer, followed by a period of testing and programming before going live. Various organizations have been involved in this effort, including the BLM Red Rock/Sloan Field Office and partner Red Rock Canyon Interpretive Association, the Nevada State Office and the National Operations Center.

This is the first fee area to use this type of system to accept payments.

**Red Rock Canyon Calling Local Artists for Spring Residencies:** BLM and the Red Rock Canyon Interpretive Association put out a call for artists to complete two-week residencies in March, April and May at Red Rock Canyon National Conservation Area.

During the inaugural artist-in-residence season, selected artists will hold open studio hours at Red Rock Canyon, develop and implement a public program and donate at least one piece of original artwork completed during the residency to be featured in an exhibition at the Red Rock Canyon visitor center this summer. Selected artists will be given a \$750 stipend (for materials and supplies) and support from Red Rock Canyon Interpretive Association staff.

The artist-in-residence program promotes awareness through art of the exceptional places protected within the BLM's National Landscape Conservation System. The program provides an opportunity for learning and dialogue about the value of preserving public lands. It will engage and inform an audience through public programs by participants, and will provide time for artists to pursue their work. Applications were accepted through January 31.

**Final La Madre Mountain and Rainbow Mountain Wilderness Management Plan available:** The BLM and U.S. Forest Service Humboldt-Toiyabe National Forest announced the availability of a management plan for two wilderness areas in the Red Rock Conservation Area.

The La Madre Mountain Wilderness Area – a 47,225-acre area – and Rainbow Mountain Wilderness Area - a 24,899-acre area - are contained within Red Rock Canyon National Conservation Area and Spring Mountains National Recreation Area.

Copies of the plan are available online at [http://www.blm.gov/nv/st/en/fo/lvfo/blm\\_programs/blm\\_special\\_areas/wilderness/wilderness\\_in\\_fo\\_page/rainbow\\_mountain\\_wilderness.html](http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/blm_special_areas/wilderness/wilderness_in_fo_page/rainbow_mountain_wilderness.html) or by contacting the BLM Las Vegas Field Office at (702) 515-5297.

Some of the specific actions included in the plan are:

- Coordinate management across BLM and FS administrative boundaries.
- Improve recognition of the wilderness boundaries.
- Eliminate vehicle intrusions in wilderness.

- Designate Rattlesnake, Limestone, and Bridge Mountain Trails for hiking use (BLM portion).
- Designate Brownstone Basin Trail extension for hiking and equestrian use (on BLM portion).
- Establishment of staging areas and installation of information kiosks.
- Coordinate with other agencies to achieve healthy land goals, including wildlife, habitat and desired vegetation goals.
- Allow for protection and study of unique archaeological, geological, and paleontological resources.
- Management of fire.
- Monitor for and remove invasive exotic or noxious plant species.
- Management of recreational uses including camping, hunting, technical rock climbing, and horseback riding.

**Red Rock NCA launch hummingbird feeder program:** The Red Rock Canyon National Conservation Area recently established a hummingbird feeder watch program with the Hummingbird Monitoring Network (<http://www.hummonnet.org/>). Feeder watches are used to obtain information about the relative abundance, timing, and seasonal movement patterns of hummingbirds at numerous locations, including Red Rock Canyon.

Watches were conducted every other week within one hour of sunrise and last for one and a half hours. Carla Wise, BLM Wildlife Biologist, and Jennifer Vincent, Red Rock Canyon Interpretive Association Interpretive Naturalist, tally the number, species, age, and sex of hummingbirds that stop at two stationed feeders. A quick eye is needed since hummingbirds have made up to 500 visits to the feeders during these short monitoring sessions so far. Hummingbird species visiting the Red Rock Canyon feeders include Anna's, Black-chinned, Rufous, and Costa's hummingbirds. Watches will resume in the spring.

**Busy Holiday at Red Rock:** During the Thanksgiving weekend, visitation at Red Rock Canyon National Conservation Area increased significantly with the most congested time occurring between 10 a.m. and 1 p.m. on Friday and Saturday. The visitor center did open on Thanksgiving. Each year, the Thanksgiving weekend proves to be one of the busiest at the Red Rock NCA. Sometimes, staff has to take action such as temporarily closing the 13-Mile Scenic Drive, to ensure safety and a high quality visitor experience, during periods of high visitation.

**Secretary Jewell visits Red Rock:** After delivering keynote remarks at the Western Governors' Association Winter Meeting on December 12, Department of the Interior Secretary Sally Jewell visited Red Rock Canyon National Conservation Area.

Her first stop was the High Point Overlook along the 13-Mile Scenic Drive where she enjoyed a sweeping view of the Calico Hills and learned more about a volunteer project to stabilize the area.

She then visited Willow Springs which highlighted the great work accomplished by BLM's partners and volunteers along Red Rock Canyon's trails. She then continued on to the Lost

Creek Trail where she visited a rock art site that had been damaged by taggers and heard about the ensuing community support, apprehending the culprit and subsequent restoration efforts.

**Students bring holiday joy to Red Rock Visitors:** Del Sol High School Strings Orchestra visited Red Rock Canyon National Conservation Area in December and brightened the days of visitors and employees alike. The students traveled through wet, slippery, snowy streets to give Red Rock a holiday show.

The 12 students, and their teacher, gifted Red Rock with by playing holiday and traditional chamber music with the viola, violin, bass and cello. Visitors raved about the experience and many commented how the music added to the holiday ambiance on such a blustery day.

**Red Rock provides science opportunity to students:** In December, the Red Rock/Sloan Field Office, Red Rock Canyon Interpretive Association and Gibson Middle School of the Clark County School District partnered together for a Science, Technology, Engineering and Math (STEM) program.

Gibson Middle School brought out 45, sixth seventh, and eighth grade students, for a wonderful adventure and be inspired by nature. The program focused on bio-mimicry and how man-made products are inspired from nature. After having a discussion on bio-mimicry, students participated in an activity. Each student was given a picture of a man-made object or a natural object. For instance, one student was given a picture of a bighorn sheep and another student was given a picture of a bicycle helmet. They needed to find each other among the other 43 students and think about how one has influenced the other.

After the activity, the students went on a short hike to observe live objects and how those objects may inspire current man-made objects. During the hike, students smelled the aromatic Creosote Bush and compared it with a Glade air freshener.

-BLM-